



# KOCHTREAT® 275

## Section 1. Identification

Product Identifier **KOCHTREAT® 275**  
General Use Specialty Cleaner  
Physical Description Liquid

### Manufacturer/Importer/Supplier/Distributor Information

Company Name John R Hess & Company, Inc.  
Address 400 Station St  
Cranston, RI 02910  
USA  
Telephone (401) 785-9300 (800) 556-4377  
E-mail [custerv@jrhess.com](mailto:custerv@jrhess.com)  
Emergency Phone Numbers Chemtrec 1-800-424-9300 (Spill, Leak, Fire, Exposure, Accident)  
+1 (703) 527-3887 (outside USA)

## Section 2 Hazards Identification

Classification of the substance or mixture:  
OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR §1910.1200).

Classification of the substance or mixture

### Health hazards

Acute toxicity (Oral) Category 4  
Skin corrosion/irritation Category 1A – 1C  
Serious eye damage/eye irritation Category 1  
Specific target organ toxicity (single exposure) Category 2

### Label Elements



Globally Harmonized System (GHS) Classification and Labeling GHS

Signal Word: DANGER

**Hazard Statements**

H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H318 - Causes serious eye damage.  
H371 - May cause damage to organs (kidney, liver, spleen).

**Precautionary Statements**

**Prevention** P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response** P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+311 - If exposed or concerned: Call a POISON CENTER/Doctor  
P310 - Immediately call a POISON CENTER or doctor/physician.  
P321 - Specific treatment see Response/First aid section on this label. P330 - Rinse mouth.  
P363 - Wash contaminated clothing before reuse.

**Storage & Disposal** P405 - Store locked up.  
**Disposal** Dispose of contents in accordance with local/regional/national/international regulations.

**OSHA Regulatory Status** This material is classified as hazardous under OSHA regulations.

**Potential Health Effects (Acute and Chronic)**

**Chronic** None

**Inhalation** Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
Mist may be severely irritating to nose, throat and lungs depending on concentration and duration of exposure.

**Skin Contact** Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin. Corrosive, causes permanent skin damage (scarring).

**Eye Contact** Causes severe eye irritation.  
Corrosive. Will cause eye burns and permanent tissue damage.

**Ingestion** Corrosive to mouth, esophagus and stomach.  
Harmful if swallowed.  
Low order of toxicity.

**Section 3. Composition / Information on Ingredients**

**Hazardous Components**

Chemical Name	CAS NO	Concentration	RTECS #
1 -Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	58 - 62%	SZ8562100
Phosphorous acid, Ortho	13598-36-2	<2.0 %	SZ6400000

**Section 4. First Aid Measures**

General Advice	Immediate medical attention is required.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen.
Skin Contact	Remove all contaminated clothes and shoes. Wash off IMMEDIATELY with plenty of water for at least 15 – 20 minutes. Call a physician. Wash contaminated clothing before reuse.
Eye Contact	Flush eyes immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses if present and easy to do so. Continue rinsing. Call a physician.
Ingestion	Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that the stomach content doesn't get into the lungs. Call a physician.
Signs and Symptoms of Exposure	The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.
Note to Physician	Treat symptomatically and supportively.

## Section 5. Fire-fighting Measures

Flammability Classification	Non-flammable
Flash Pt	NP
Explosive Limits	LEL: NA, UEL: NA
Autoignition Pt	NP
Suitable Extinguishing Media	Water spray
Unsuitable Extinguishing Media	Unknown
Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
Flammable Properties and Hazards	Material will not burn.

## Section 6. Accidental Release Measures

### Steps to be Taken in Case Material is Released or Spilled

Personal Precautions	Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.
Methods & Materials for Containment and Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

## Section 7. Handling and Storage

**Precautions for Safe Handling**

"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioned, or properly disposed of. Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing.

**Storage Conditions**

No special storage requirements.

**Section 8. Exposure Controls / Personal Protection**

Chemical Name	CAS NO	OSHA TWA	ACGIH TWA	Other Limits
1 -Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	PEL: Not available	TLV: Not available	Not available
Phosphorous acid, Ortho	13598-36-2	PEL: Not available	TLV: Not available	Not available

**Individual protection measures, such as personal protective equipment**

Eye/face protection	Wear splash proof safety goggles
Skin protection:	
Hand protection	Wear compatible chemical-resistant gloves.
Other	Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.
Respiratory protection	Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Respirator protection is not normally required.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Engineering Controls	Safety shower and eye bath. Mechanical exhaust required. There are no special ventilation requirements.

**Section 9. Physical and Chemical Properties**

Physical State	Liquid
Color	None to slight odor
Odor	Clear to colorless light straw
pH	< 2
Melting point/freezing point	NA
Initial boiling point and boiling range	NA
Flash point	NP
Evaporation rate	NA
Heat value	NP

Specific Gravity	~ 1.444 at 25.0 C (77.0 F)
Explosive limit - lower (%)	NA
Explosive limit -upper (%)	NA
Saturated Vapor Concentration	NA
Vapor pressure (vs air or mm Hg) 1)	NA
Vapor density (vs air = 1)	NA
Solubility(ies):	
Solubility (water)	Complete
Partition coefficient (n-octanol/water)	NA
Auto-ignition temperature	NP
Decomposition Temperature	NA
Percent Volatile	~ 38.00 % by weight
VOC/Volume	NP
Density	~ 12.0 LB/GA
Bulk density	NA
Particle Size	NP
Corrosion Rate	NP
Molecular formula	C2H8O7P2
Molecular weight	206.028

## Section 10. Stability and Reactivity

Reactivity	Substantial heat is evolved when mixed with alkali.
Chemical Stability	Material is stable under normal conditions.
Possible of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with common metals produces flammable hydrogen gas.
Incompatible materials	Strong oxidizing agents and strong alkali.
Hazardous decomposition products	Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine. Carbon dioxide.
Conditions to Avoid	No data available.
Hazardous Reactions	

## Section 11. Toxicological Information

Epidemiology	No data available
Teratogenicity	No data available

### Information on toxicological effects

Reproductive Effects:	Reproductive Effects: TDLo, Intraperitoneal, Mouse, 40.00 MG/KG, female 7 day(s) after conception.
Mutagenicity: Neurotoxicity:	
Other Studies	Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of

1 -Hydroxyethylidene-1,1-diphosphonic acid  
CAS# 2809-21-4

implants per female; total number of implants per corpora lutea).  
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).  
- Shika Igaku. Odontology., Vol/p/yr: 50,879, 1987

Reproductive Effects: TDLo, Intraperitoneal, Mouse, 200.0 MG/KG, female 7 day(s) after conception.  
Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).  
- Journal of Osaka Dental University., Vol/p/yr: 20,91, 1986

Reproductive Effects: TDLo, Subcutaneous, Mouse, 200.0 MG/KG, female 13 day(s) after conception.  
Result: Specific Developmental Abnormalities: Musculoskeletal system.  
-Teratology, The International Journal of Abnormal Development, Alan R. Liss, Inc., 41 E. 11th St., New York, NY 10003, Vol/p/yr: 26(1),16A, 1982

Reproductive Effects: TDLo, Subcutaneous, Mouse, 1400. MG/KG, female 11-17 day(s) after conception.  
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.  
- Senten Ijo. Congenital Anomalies., For publisher information, see CGANE7, Osaka Japan, Vol/p/yr: 22,47, 1982

Acute toxicity, LD50, Oral, Mouse, 1800. MG/KG.  
Result: Behavioral: Convulsions or effect on seizure threshold.

Gastrointestinal: Hypermotility, diarrhea.

Nutritional and Gross Metabolic: Changes in body temperature increase.  
- Angewandte Chemie, International Edition in English., VCH Pub., Inc., 303 NW 12<sup>th</sup> Ave., Deerfield Beach, FL 33441, Vol/p/yr: 14,94, 1975

Phosphorous acid, Ortho  
CAS # 13598-36-2

Acute toxicity, LD50, Oral, Rat, 1895. MG/KG.

Result: Behavioral: Convulsions or effect on seizure threshold.

Gastrointestinal: Hypermotility, diarrhea.

Nutritional and Gross Metabolic :Changes in body temperature increase.  
Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 56(4),24, 1991

Acute toxicity, LD50, Oral, Mouse, 1700. MG/KG.

Result: Behavioral: Tremor.

Behavioral: Muscle contraction or spasticity.- Toksikologicheskii Vestnik., Vol/p/yr: (6),38, 1995

Chemical Name	CAS #	NTP	IARC	ACGIH	OSHA
1 -Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	NA	NA	NA	NA
Phosphorous acid, Ortho	13598-36-2	NA	NA	NA	NA

## Section 12. Ecological Information

Product	Species	Test Results
<u>1 -Hydroxyethylidene-1,1-diphosphonic acid</u>		
Crustacea	LC50 Daphnia magna	527.0 mg/l, 48 hrs
Fish	LC50 Bluegill ( <i>Lepomis macrochirus</i> )	868.0 mg/l, 96 hrs
	LC50 Rainbow Trout	368.0 mg/l, 96 hrs

Phosphorous acid, Ortho

Fathead Minnow (*Pimephales promelas*), 100.0 mg/L,  
96 hrs, Mortality  
Water temperature: 82.00 C (179.6 F)  
pH: 8.50

10000. Mg/l  
4 hrs, Mortality,  
Water temperature: 82.00 C (179.6 F)  
pH:8.50

Toxicity of Photographic Processing Chemicals to Fish, Terhaar, C.J., W.S. Ewell, S.P. Dziuba, and D.W. Fassett, 1972

Persistence and Degradability

Degrades after acclimatization.

Bioaccumulation

This material is not expected to bio-accumulate.

Mobility in soil

Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

**Section 13. Disposal Considerations**

Disposal instructions Discarded product, as sold, would be considered a RCRA Characteristic Hazardous Waste as it meets the definition /characteristic of corrosivity (designated as D002).

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed

Hazardous waste code D002

**Section 14. Transport Information**

Acute Toxicity Oral, Category 4 - Warning! Harmful if swallowed  
 Skin Corrosion/Irritation Category 1A-1C - Danger! Causes severe skin burns and eye damage  
 Serious Eye Damage/Eye Irritation Category 1 - Danger! Causes serious eye damage  
 Specific Target Organ Toxicity (single exposure) Category 2 - Warning! May cause damage to organs (kidney, liver, spleen)

USA DOTUSA LAND TRANSPORT

UN Number UN3265  
 UN proper shipping name Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1, 1-diphosphonic acid)  
 Transport hazard class 8  
 Packing group II

TDGCANADIAN LAND TRANSPORT

TDG proper shipping name No information available  
 Transport hazard class 8  
 Packing group II

ADR/RIDEUROPEAN LAND TRANSPORT

UN Number 3265  
 ADR/RID shipping name No information available  
 Transport hazard class 8  
 Packing group II

IMDG/IMOMARINE TRANSPORT

IMDG MFAG Number  
 IMDG EMS Page  
 IMDG proper shipping name Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1, 1-diphosphonic acid)  
 Transport hazard class 8  
 Packing group II  
 Environmental hazards Yes  
 Marine pollutant Yes  
 EmS F-A, S-B

ICAO/IATAAIR TRANSPORT

ICAO proper shipping name Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1, 1-diphosphonic acid)

**Section 15. Regulatory Information**EPA SARA Superfund Amendments and Reauthorization Act of 1986 (SARA)

Chemical Name	CAS #	S.302 (EHS)	S.304 (RQ)	S.313 (TRI)
1 -Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	No	No	No
Phosphorous acid, Ortho	13598-36-2	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312

Immediate Hazard Yes  
 Delayed Hazard Yes  
 Fire Hazard No



Pressure Hazard No  
 Reactive Hazard No

## Other US EPA or State Lists

Chemical Name	CAS #	CAA, HAP, ODC	CWA NPDES	CA PROP 65	TSCA
1 -Hydroxyethylidene-1,1-diphosphonic acid	2809-21-4	No	No - Inventory	No	Yes
Phosphorous acid, Ortho	13598-36-2	No	No - Inventory	No	Yes

## International Regulatory Lists

Country(s) or Region	1 -Hydroxyethylidene-1,1-diphosphonic acid	Phosphorous acid, Ortho
Australia (ICS)	Yes	Yes
Canada (DSL)	Yes	Yes
Canada (NDSL)	No	No
China (IECSC)	Yes	Yes
Europe (REACH) (R), (P)	Yes	Yes
Japan (ENCS)	Yes	Yes
Korea (ECL)	Yes	Yes
Mexico (INSQ)	Yes	Yes
Philippines (ICCS)	Yes	Yes
Taiwan (TCSCA)	Yes	Yes
United States and Puerto Rico (TSCA)	Yes	Yes

\*\*Yes\*\* indicates this product complies with the inventory requirements administered by the governing country(ies).

\*\*No\*\* indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## Section 16. Other Information

## Hazard Rating System

HMIS

HEALTH	3
FLAMMABILITY	0
PHYSICAL	1
PPE	Dn

NFPA



Additional Information  
 About This Product

NA- Not Available  
 NP- Not Applicable  
 NR- Not Required  
 PR- Proprietary  
 TS- Trade Secret

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